



## DEPARTMENT OF ENVIRONMENTAL QUALITY

KATHLEEN BABINEAUX BLANCO

GOVERNOR

MIKE D. McDANIEL, Ph.D.

SECRETARY

Certified Mail No.:

Agency Interest No. 42895  
Activity No. PER20060001

Mr. James Boudreaux  
Plant Superintendent  
Praxair, Inc.  
P.O. Box 2419  
Sulphur, LA 70664

RE: Initial Title V Operating Permit, Sulphur Facility, Praxair, Inc., Sulphur, Calcasieu Parish, Louisiana

Dear Mr. Boudreaux:

This is to inform you that the Part 70 operating permit for the above referenced facility has been approved under LAC 33:III.501. The submittal was approved on the basis of the application submitted and the approval in no way relieves of the applicant of the obligation to comply with all applicable requirements.

It will be considered a violation of the permit if all proposed control measures and/or equipment are not properly operated and maintained as specified in the application.

Operation of this facility is hereby authorized under the terms and conditions of this permit. This authorization shall expire at midnight on the \_\_\_\_ of \_\_\_\_\_, 2012, unless a timely and complete renewal application has been submitted six months prior to expiration. Terms and conditions of this permit shall remain in effect until such time as the permitting authority takes final action on the application for permit renewal. The permit number and Agency Interest No. cited above should be referenced in future correspondence regarding this facility.

Done this \_\_\_\_ day of \_\_\_\_\_, 2007

Permit No.: 0520-00170-V0

Sincerely,

Chuck Carr Brown, Ph.D.  
Assistant Secretary

CCB:CXL  
cc: EPA Region VI

## ENVIRONMENTAL SERVICES

: PO BOX 4313, BATON ROUGE, LA 70821-4313

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**AIR PERMIT BRIEFING SHEET  
AIR PERMITS DIVISION  
LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY**

**Sulphur Facility  
Praxair, Inc.  
AI No. 42895  
Sulphur, Calcasieu Parish, Louisiana**

**I. BACKGROUND**

The Praxair, Inc., Sulphur facility operates a hydrogen production plant under Permit No. 0520-00170-01 issued May 13, 2003. The ownership was changed from Liquid Carbonic Process Plants to Praxair, Inc. in 1996.

**II. ORIGIN**

A permit application and Emission Inventory Questionnaire was submitted by Praxair, Inc. on February 13, 2006 requesting an Initial Part 70 operating permit.

**III. DESCRIPTION**

The Praxair, Sulphur facility provides hydrogen for the CITGO Petroleum Corporation Lake Charles Refinery and for pipeline consumption by a variety of additional consumers. The process includes a reformer furnace for hydrogen production, several reactors for catalysis of impurities and a Pressure Swing Adsorption (PSA) Unit for separation of any remaining impurities from the hydrogen product or by-products of the reformer operation. Also included are associated boiler feed water, steam, and cooling tower facilities.

Estimated emissions in tons per year are as follows:

<u>Pollutant</u>	<u>Permitted</u>	<u>Proposed</u>	<u>Change</u>
PM <sub>10</sub>	18.59	37.24	+ 18.65
SO <sub>2</sub>	0.36	2.60	+ 2.24
NO <sub>x</sub>	96.71	215.10	+ 118.39
CO	74.79	83.09	+ 8.30
VOC	11.62	31.45	+ 19.83

Praxair will become a major source of criteria pollutants as a result of increasing the allowable heat input rate of the reformer to 862.92 MM BTU/hr with this application.

**IV. TYPE OF REVIEW**

This application was reviewed for compliance with the Louisiana Air Quality Regulations. New Source Performance Standards (NSPS), NESHAP and Prevention of Significant Deterioration (PSD) do not apply.

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This facility is a minor source of toxic air pollutants.

**V. Credible Evidence**

Notwithstanding any other provisions of any applicable rule or regulation or requirement of this permit that state specific methods that may be used to assess compliance with applicable requirements, pursuant to 40 CFR Part 70 and EPA's Credible Evidence Rule, 62 Fed. Reg. 8314 (Feb. 24, 1997), any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed shall be considered for purposes of Title V compliance certifications. Furthermore, for purposes of establishing whether or not a person has violated or is in violation of any emissions limitation or standard or permit condition, nothing in this permit shall preclude the use, including the exclusive use, by any person of any such credible evidence or information.

**VI. Public Notice**

A notice requesting public comment on the permit was published in XXXX, Baton Rouge, on February XX, 2007. A copy of the public notice was mailed to concerned citizens listed in the Office of Environmental Services Public Notice Mailing List on February XX, 2007. The draft permit was also submitted to US EPA Region VI. No comment was received.

**VII. Effects on Ambient Air**

Dispersion Model(s) Used: None

**VIII. General Condition XVII Activities**

Work Activity	Schedule (events/yr)	Emission Rates - TPY				
		PM <sub>10</sub>	SO <sub>2</sub>	NOx	CO	VOC
H <sub>2</sub> Compressor trip for mechanical/instrumentation or process problems	12	-	-	0.11	0.59	-
Customer upsets and purging of H <sub>2</sub> compressors for maintenance	30	-	-	0.14	0.74	-
Purging of process equipment/vessels for maintenance purposes (CO)	1	-	-	-	0.32	-
Purging of process equipment/vessels for maintenance purposes (H <sub>2</sub> )	1	-	-	0.002	0.01	-

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Work Activity	Schedule (events/yr)	Emission Rates - TPY				
		PM <sub>10</sub>	SO <sub>2</sub>	NO <sub>x</sub>	CO	VOC
Purging of process equipment/vessels for maintenance purposes (methane)	1	0.036	0.003	0.33	1.78	0.25
Purged H <sub>2</sub>	1	-	-	0.02	0.11	-
Purged syngas	1	0.002	0.0002	0.02	0.09	0.01
Pressure Swing Adsorber (PSA) upset/maintenance	5	0.06	0.004	0.50	2.74	0.38
PSV lifts on natural gas pre-heater	1	neg.	neg.	0.0001	0.0004	0.0001
PSV lifts on H <sub>2</sub> compressor	1	-	-	0.03	0.18	-
PSV lifts on high temp shift converter	2	neg.	neg.	0.0002	0.001	0.0002

**IX. Insignificant Activities**

ID No.:	Description	Citation
	Analyzer Vents	Insignificant Activity per LAC 33:III.501.B.5.A.9

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**X. Table 1. Applicable Louisiana and Federal Air Quality Requirements**

ID No.:	Description	LAC 33:III. Chapter													
		5 <sup>1</sup>	9	11	13	15	2103	2109	2111	2113	2122	2153	2147	2149	22
GRP112	Facility wide	1	1	1	1					1					
EQT001	1			1	1	2									
EQT002	2														
EQT003	3			1		2									
EQT004	4														
EQT005	5						2								
EQT006	6														

\*The regulations indicated above are State Only regulations.

<sup>1</sup> LAC 33:III.501.C.6 citations are federally enforceable except when it specifically states that the regulation is State Only.

**KEY TO MATRIX**

- 1 - The regulations have applicable requirements that apply to this particular emission source.
- The emission source may have an exemption from control stated in the regulation. The emission source may not have to be controlled but may have monitoring, recordkeeping, or reporting requirements.
- 2 - The regulations have applicable requirements that apply to this particular emission source but the source is currently exempt from these requirements due to meeting a specific criterion, such as it has not been constructed, modified or reconstructed since the regulations have been in place. If the specific criteria changes the source will have to comply at a future date.

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3 - The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source.

Blank - The regulations clearly do not apply to this type of emission source.



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<p>3 - The regulations apply to this general type of emission source (i.e. vents, furnaces, towers, and fugitives) but do not apply to this particular emission source. Blank - The regulations clearly do not apply to this type of emission source.</p>
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<b>Table 2. Explanation for Exemption Status or Non-Applicability of a Source</b>		
<b>ID No:</b>	<b>Requirement</b>	<b>Notes</b>
EQT001 Reformer	Emission Standards for Sulfur Dioxide - Emission Limitations [LAC 33:III.1503]	EXEMPT. Source emits <250 tons per year of sulfur compounds.
	Emission Standards for Sulfur Dioxide - Continuous Emission Monitoring [LAC 33:III.1511]	EXEMPT. SO <sub>2</sub> continuous emissions monitors are not required for sources emitting less than 100 TPY SO <sub>2</sub> .
EQT002 Cooling Tower	NESHAP for Source Categories Subpart Q - Chromium Emissions from Industrial Process Cooling Towers (IPCT) [40 CFR Part 63.400(a)]	DOES NOT APPLY. No water treatment programs using chromium or chromium compounds at the IPCT.
EQT003 Flare	Emission Standards for Sulfur Dioxide - Emission Limitations [LAC 33:III.1503]	EXEMPT. Source emits <250 tons per year of sulfur compounds.
EQT004 Deaerator	Comprehensive Toxic Air Pollutant Emission Control Program [LAC 33:III.5109]	DOES NOT APPLY. Minor source of air toxics.
EQT005 Condensate Tank	Control of Emission of Organic Compounds - Storage of VOC Compounds [LAC 33:III.2103]	EXEMPT. Storage vessels storing VOC with true vapor pressure <1.5 psia are exempt from the provisions of this section.

The above table provides explanation for both the exemption status or non-applicability of a source cited by 1, 2 or 3 in the matrix presented in Section X (Table 1) of this permit.

## 40 CFR PART 70 GENERAL CONDITIONS

- A. The term of this permit shall be five (5) years from date of issuance. An application for a renewal of this 40 CFR Part 70 permit shall be submitted to the administrative authority no later than six months prior to the permit expiration date. Should a complete permit application not be submitted six months prior to the permit expiration date, a facility's right to operate is terminated pursuant to 40 CFR Section 70.7(c)(ii). Operation may continue under the conditions of this permit during the period of the review of the application for renewal. [LAC 33:III.507.E.1, E.3, E.4, reference 40 CFR 70.6(a)(2)]
- B. The conditions of this permit are severable; and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby. [Reference 40 CFR 70.6(a)(5)]
- C. Permittee shall comply with all conditions of the 40 CFR Part 70 permit. Any permit noncompliance constitutes a violation of the Clean Air Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. [LAC 33:III.507.B.2, reference 40 CFR 70.6(a)(6)(i) & (iii)]
- D. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. [Reference 40 CFR 70.6(a)(6)(ii)]
- E. This permit does not convey any property rights of any sort, or an exclusive privilege. [Reference 40 CFR 70.6(a)(6)(iv)]
- F. The permittee shall furnish to the permitting authority, within a reasonable time, any information that the permitting authority may request in writing to determine whether cause exists for modifying, revoking, and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the permitting authority copies of records required to be kept by the permit or, for information claimed to be confidential, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality. A claim of confidentiality does not relieve the permittee of the requirement to provide the information. [LAC 33:III.507.B.2, 517.F, reference 40 CFR 70.6(a)(6)(v)]
- G. Permittee shall pay fees in accordance with LAC 33:III.Chapter 2 and 40 CFR Section 70.6(a)(7). [LAC 33:III.501.C.2, reference 40 CFR 70.6(a)(7)]

## 40 CFR PART 70 GENERAL CONDITIONS

- H. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the permitting authority or authorized representative to perform the following:
1. enter upon the permittee's premises where a 40 CFR Part 70 source is located or emission-related activity is conducted, or where records must be kept under the conditions of the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(i)];
  2. have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(ii)];
  3. inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(iii)]; and
  4. as authorized by the Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit or applicable requirements. [LAC 33:III.507.H.2, reference 40 CFR 70.6(c)(2)(iv)]
- I. All required monitoring data and supporting information shall be kept available for inspection at the facility or alternate location approved by the agency for a period of at least five (5) years from the date of the monitoring sample, measurement, report, or application. Supporting information includes calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and all reports required by the permit.  
[Reference 40 CFR 70.6(a)(3)(ii)(B)]
- J. Records of required monitoring shall include the following:
1. the date, place as defined in the permit, and time of sampling or measurements;
  2. the date(s) analyses were performed;
  3. the company or entity that performed the analyses;
  4. the analytical techniques or methods used;
  5. the results of such analyses; and
  6. the operating conditions as existing at the time of sampling or measurement.
- [Reference 40 CFR 70.6(a)(3)(ii)(A)]
- K. Permittee shall submit at least semiannually, reports of any required monitoring, clearly identifying all instances of deviations from permitted monitoring requirements, certified by a responsible company official. For previously reported deviations, in lieu of attaching the individual deviation reports, the semiannual report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The semiannual reports shall be submitted to the Office of Environmental Compliance, Enforcement Division by March 31 for the preceding period encompassing July through December and September 30 for the preceding period encompassing January through June. Any quarterly deviation report required to be submitted by March 31 or September 30 in accordance with Part 70 General Condition R may be consolidated with the semi-annual reports required by this general condition as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. [LAC 33:III.507.H, reference 40 CFR 70.6(a)(3)(iii)(A)]
- L. The permittee shall submit at least semiannual reports on the status of compliance pursuant to 40 CFR Section 70.5 (c) (8) and a progress report on any applicable schedule of compliance pursuant to 40 CFR Section 70.6 (c) (4). [LAC 33:III.507.H.1, reference 40 CFR 70.6(c)(4)]

## 40 CFR PART 70 GENERAL CONDITIONS

- M. Compliance certifications per LAC 33:III.507.H.5 shall be submitted to the Administrator as well as the permitting authority. For previously reported compliance deviations, in lieu of attaching the individual deviation reports, the annual report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The compliance certifications shall be submitted to the Office of Environmental Compliance, Enforcement Division by March 31 for the preceding calendar year. [LAC 33:III.507.H.5, reference 40 CFR 70.6(c)(5)(iv)]
- N. If the permittee seeks to reserve a claim of an affirmative defense as provided in LAC 33:III.507.J.2, the permittee shall, in addition to any emergency or upset provisions in any applicable regulation, notify the permitting authority within 2 working days of the time when emission limitations were exceeded due to the occurrence of an upset. In the event of an upset, as defined under LAC 33:III.507.J, which results in excess emissions, the permittee shall demonstrate through properly signed, contemporaneous operating logs, or other relevant evidence that: 1) an emergency occurred and the cause was identified; 2) the permitted facility was being operated properly at the time; and 3) during the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standard or requirement of the permit. [LAC 33:III.507.J.2, reference 40 CFR 70.6(g)(3)(iv) & (i-iii)]
- O. Permittee shall maintain emissions at a level less than or equal to that provided for under the allowances that the 40 CFR Part 70 source lawfully holds under Title IV of the Clean Air Act or the regulations promulgated thereunder. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid rain program, provided that such increases do not require a permit revision under any other applicable requirement. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement. Any such allowance shall be accounted for according to the procedures established in regulations promulgated under Title IV of the Clean Air Act. [Reference 40 CFR 70.6(a)(4)]
- P. Any permit issued pursuant to 40 CFR Part 70 may be subject to reopening prior to the expiration of the permit for any of the conditions specified in 40 CFR Section 70.7(f) or LAC 33:III.529. [LAC 33:III.529.A-B, reference 40 CFR 70.7(f)]
- Q. Permittee may request an administrative amendment to the permit to incorporate test results from compliance testing if the following criteria are met:
1. the changes are a result of tests performed upon start-up of newly constructed, installed, or modified equipment or operations;
  2. increases in permitted emissions will not exceed five tons per year for any regulated pollutant;
  3. increases in permitted emissions of Louisiana toxic air pollutants or of federal hazardous air pollutants would not constitute a modification under LAC 33:III. Chapter 51 or under Section 112 (g) of the Clean Air Act;
  4. changes in emissions would not require new source review for prevention of significant deterioration or nonattainment and would not trigger the applicability of any federally applicable requirement;
  5. changes in emissions would not qualify as a significant modification; and
  6. the request is submitted no later than 12 months after commencing operation. [LAC 33:III.523.A, reference 40 CFR 70.7(d)]

## 40 CFR PART 70 GENERAL CONDITIONS

- R. Permittee shall submit prompt reports of all permit deviations as specified below to the Office of Environmental Compliance, Enforcement Division. All such reports shall be certified by a responsible official in accordance with 40 CFR 70.5(d).
1. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.
  2. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.
  3. A written report shall be submitted quarterly to address all permit deviations not included in paragraphs 1 or 2 above. Unless required by an applicable reporting requirement, a written report is not required during periods in which there is no deviation. The quarterly deviation reports submitted on March 31 and September 30 may be consolidated with the semi-annual reports required by Part 70 General Condition K as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. For previously reported permit deviations, in lieu of attaching the individual deviation reports, the quarterly report may clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any permit deviations occurring during the corresponding specified calendar quarter:
    - a. Report by June 30 to cover January through March
    - b. Report by September 30 to cover April through June
    - c. Report by December 31 to cover July through September
    - d. Report by March 31 to cover October through December
  4. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided such reports are certified in accordance with 40 CFR 70.5(d) and contain all information relevant to the permit deviation. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107. [Reference 40 CFR 70.6(a)(3)(iii)(B)]
- S. Permittee shall continue to comply with applicable requirements on a timely basis, and will meet on a timely basis applicable requirements that become effective during the permit term. [Reference 40 CFR 70.5(c)(8)(iii)]

## 40 CFR PART 70 GENERAL CONDITIONS

- T. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
1. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to 40 CFR 82.156;
  2. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 CFR 82.158;
  3. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161;
  4. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to 40 CFR 82.166. ("MVAC-like appliance" as defined at 40 CFR 82.152);
  5. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR 82.156; and
  6. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166. [Reference 40 CFR 82, Subpart F]
- U. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR Part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.
- The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant. [Reference 40 CFR 82, Subpart B]
- V. Data availability for continuous monitoring or monitoring to collect data at specific intervals: Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation (or shall collect data at all required intervals) at all times that the emissions unit is operating. For purposes of reporting monitoring deviations under Part 70 General Conditions K and R, and unless otherwise provided for in the Specific Requirements (or Table 3) of this permit, the minimum degree of data availability shall be at least 90% (based on a monthly average) of the operating time of the emissions unit or activity being monitored. This condition does not apply to Leak Detection and Repair (LDAR) programs for fugitive emissions (e.g., 40 CFR 60 Subpart VV, 40 CFR 63 Subpart H).

## LOUISIANA AIR EMISSION PERMIT GENERAL CONDITIONS

- I. This permit is issued on the basis of the emissions reported in the application for approval of emissions and in no way guarantees that the design scheme presented will be capable of controlling the emissions to the type and quantities stated. Failure to install, properly operate and/or maintain all proposed control measures and/or equipment as specified in the application and supplemental information shall be considered a violation of the permit and LAC 33:III.501. If the emissions are determined to be greater than those allowed by the permit (e.g. during the shakedown period for new or modified equipment) or if proposed control measures and/or equipment are not installed or do not perform according to design efficiency, an application to modify the permit must be submitted. All terms and conditions of this permit shall remain in effect unless and until revised by the permitting authority.
  
- II. The permittee is subject to all applicable provisions of the Louisiana Air Quality Regulations. Violation of the terms and conditions of the permit constitutes a violation of these regulations.
  
- III. The Emission Rates for Criteria Pollutants, Emission Rates for TAP/HAP & Other Pollutants, and Specific Requirements sections or, where included, Emission Inventory Questionnaire sheets establish the emission limitations and are a part of the permit. Any operating limitations are noted in the Specific Requirements or, where included, Tables 2 and 3 of the permit. The synopsis is based on the application and Emission Inventory Questionnaire dated February 13, 2006.
  
- IV. This permit shall become invalid, for the sources not constructed, if:
  - A. Construction is not commenced, or binding agreements or contractual obligations to undertake a program of construction of the project are not entered into, within two (2) years (18 months for PSD permits) after issuance of this permit, or;
  - B. If construction is discontinued for a period of two (2) years (18 months for PSD permits) or more.

The administrative authority may extend this time period upon a satisfactory showing that an extension is justified.

This provision does not apply to the time period between construction of the approved phases of a phased construction project. However, each phase must commence construction within two (2) years (18 months for PSD permits) of its projected and approved commencement date.
  
- V. The permittee shall submit semiannual reports of progress outlining the status of construction, noting any design changes, modifications or alterations in the construction schedule which have or may have an effect on the emission rates or ambient air quality levels. These reports shall continue to be submitted until such time as construction is certified as being complete. Furthermore, for any significant change in the design, prior approval shall be obtained from the Office of Environmental Services, Air Permits Division.
  
- VI. The permittee shall notify the Department of Environmental Quality, Office of Environmental Services, Air Permits Division within ten (10) calendar days from the date that construction is certified as complete and the estimated date of start-up of operation. The appropriate Regional Office shall also be so notified within the same time frame.

## LOUISIANA AIR EMISSION PERMIT GENERAL CONDITIONS

- VII. Any emissions testing performed for purposes of demonstrating compliance with the limitations set forth in paragraph III shall be conducted in accordance with the methods described in the Specific Conditions and, where included, Tables 1, 2, 3, 4, and 5 of this permit. Any deviation from or modification of the methods used for testing shall have prior approval from the Office of Environmental Assessment, Air Quality Assessment Division.
  
- VIII. The emission testing described in paragraph VII above, or established in the specific conditions of this permit, shall be conducted within sixty (60) days after achieving normal production rate or after the end of the shakedown period, but in no event later than 180 days after initial start-up (or restart-up after modification). The Office of Environmental Assessment, Air Quality Assessment Division shall be notified at least (30) days prior to testing and shall be given the opportunity to conduct a pretest meeting and observe the emission testing. The test results shall be submitted to the Air Quality Assessment Division within sixty (60) days after the complete testing. As required by LAC 33:III.913, the permittee shall provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits.
  
- IX. The permittee shall, within 180 days after start-up and shakedown of each project or unit, report to the Office of Environmental Compliance, Enforcement Division any significant difference in operating emission rates as compared to those limitations specified in paragraph III. This report shall also include, but not be limited to, malfunctions and upsets. A permit modification shall be submitted, if necessary, as required in Condition I.
  
- X. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of at least five (5) years.
  
- XI. If for any reason the permittee does not comply with, or will not be able to comply with, the emission limitations specified in this permit, the permittee shall provide the Office of Environmental Compliance, Enforcement Division with a written report as specified below.
  - A. A written report shall be submitted within 7 days of any emission in excess of permit requirements by an amount greater than the Reportable Quantity established for that pollutant in LAC 33.I.Chapter 39.
  - B. A written report shall be submitted within 7 days of the initial occurrence of any emission in excess of permit requirements, regardless of the amount, where such emission occurs over a period of seven days or longer.
  - C. A written report shall be submitted quarterly to address all emission limitation exceedances not included in paragraphs A or B above. The schedule for submittal of quarterly reports shall be no later than the dates specified below for any emission limitation exceedances occurring during the corresponding specified calendar quarter:
    - 1. Report by June 30 to cover January through March
    - 2. Report by September 30 to cover April through June
    - 3. Report by December 31 to cover July through September
    - 4. Report by March 31 to cover October through December



## LOUISIANA AIR EMISSION PERMIT GENERAL CONDITIONS

D. Each report submitted in accordance with this condition shall contain the following information:

1. Description of noncomplying emission(s);
2. Cause of noncompliance;
3. Anticipated time the noncompliance is expected to continue, or if corrected, the duration of the period of noncompliance;
4. Steps taken by the permittee to reduce and eliminate the noncomplying emissions; and
5. Steps taken by the permittee to prevent recurrences of the noncomplying emissions.

E. Any written report submitted in advance of the timeframes specified above, in accordance with an applicable regulation, may serve to meet the reporting requirements of this condition provided all information specified above is included. For Part 70 sources, reports submitted in accordance with Part 70 General Condition R shall serve to meet the requirements of this condition provided all specified information is included. Reporting under this condition does not relieve the permittee from the reporting requirements of any applicable regulation, including LAC 33.I.Chapter 39, LAC 33.III.Chapter 9, and LAC 33.III.5107.

XII. Permittee shall allow the authorized officers and employees of the Department of Environmental Quality, at all reasonable times and upon presentation of identification, to:

- A. Enter upon the permittee's premises where regulated facilities are located, regulated activities are conducted or where records required under this permit are kept;
- B. Have access to and copy any records that are required to be kept under the terms and conditions of this permit, the Louisiana Air Quality Regulations, or the Act;
- C. Inspect any facilities, equipment (including monitoring methods and an operation and maintenance inspection), or operations regulated under this permit; and
- D. Sample or monitor, for the purpose of assuring compliance with this permit or as otherwise authorized by the Act or regulations adopted thereunder, any substances or parameters at any location.

XIII. If samples are taken under Section XII.D. above, the officer or employee obtaining such samples shall give the owner, operator or agent in charge a receipt describing the sample obtained. If requested prior to leaving the premises, a portion of each sample equal in volume or weight to the portion retained shall be given to the owner, operator or agent in charge. If an analysis is made of such samples, a copy of the analysis shall be furnished promptly to the owner, operator or agency in charge.

XIV. The permittee shall allow authorized officers and employees of the Department of Environmental Quality, upon presentation of identification, to enter upon the permittee's premises to investigate potential or alleged violations of the Act or the rules and regulations adopted thereunder. In such investigations, the permittee shall be notified at the time entrance is requested of the nature of the suspected violation. Inspections under this subsection shall be limited to the aspects of alleged violations. However, this shall not in any way preclude prosecution of all violations found.

## LOUISIANA AIR EMISSION PERMIT GENERAL CONDITIONS

- XV. The permittee shall comply with the reporting requirements specified under LAC 33:III.919 as well as notification requirements specified under LAC 33:III.927.
- XVI. In the event of any change in ownership of the source described in this permit, the permittee and the succeeding owner shall notify the Office of Environmental Services, Air Permits Division, within ninety (90) days after the event, to amend this permit.
- XVII. Very small emissions to the air resulting from routine operations, that are predictable, expected, periodic, and quantifiable and that are submitted by the permitted facility and approved by the Air Permits Division are considered authorized discharges. Approved activities are noted in the General Condition XVII Activities List of this permit. To be approved as an authorized discharge, these very small releases must:
1. Generally be less than 5 TPY
  2. Be less than the minimum emission rate (MER)
  3. Be scheduled daily, weekly, monthly, etc., or
  4. Be necessary prior to plant startup or after shutdown [line or compressor pressuring/depressuring for example]

These releases are not included in the permit totals because they are small and will have an insignificant impact on air quality. This general condition does not authorize the maintenance of a nuisance, or a danger to public health and safety. The permitted facility must comply with all applicable requirements, including release reporting under LAC 33:I.3901.

- XVIII. Provisions of this permit may be appealed in writing pursuant to La. R.S. 30:2024(A) within 30 days from receipt of the permit. Only those provisions specifically appealed will be suspended by a request for hearing, unless the secretary or the assistant secretary elects to suspend other provisions as well. Construction cannot proceed except as specifically approved by the secretary or assistant secretary. A request for hearing must be sent to the following:

Attention: Office of the Secretary, Legal Services Division  
La. Dept. of Environmental Quality  
Post Office Box 4302  
Baton Rouge, Louisiana 70821-4302

- XIX. Certain Part 70 general conditions may duplicate or conflict with state general conditions. To the extent that any Part 70 conditions conflict with state general conditions, then the Part 70 general conditions control. To the extent that any Part 70 general conditions duplicate any state general conditions, then such state and Part 70 provisions will be enforced as if there is only one condition rather than two conditions.

**INVENTORIES**

AI ID: 42895 - Praxair Inc - Sulphur Hydrogen Mfg Facility

Activity Number: PER20060001

Permit Number: 0520-00170-V0

Air - Title V Regular Permit Initial

**Subject Item Inventory:**

ID	Description	Tank Volume	Max. Operating Rate	Normal Operating Rate	Contents	Operating Time
EQT001	1 878.60 MM BTU/hr Reformer			878.6 MM BTU/hr		8760 hr/yr (All Year)
EQT002	2 5000 GPM Cooling Tower			5000 gallons/min		8760 hr/yr (All Year)
EQT003	3 0.18 MM BTU/hr Flare			.18 MM BTU/hr		8760 hr/yr (All Year)
EQT004	4 Deaerator					8760 hr/yr (All Year)
EQT005	5 102,792 gallons Condensate Tank				Condensate	8760 hr/yr (All Year)
EQT006	6 800 gallons Sulfuric Acid Tank	800 gallons			Sulfuric Acid	8760 hr/yr (All Year)

**Subject Item Groups:**

ID	Description	Included Components (from Above)
GRP001	Entire Facility	EQT1 1 878.60 MM BTU/hr Reformer
GRP001	Entire Facility	EQT2 2 5000 GPM Cooling Tower
GRP001	Entire Facility	EQT3 3 0.18 MM BTU/hr Flare
GRP001	Entire Facility	EQT4 4 Deaerator
GRP001	Entire Facility	EQT5 5 102,792 gallons Condensate Tank
GRP001	Entire Facility	EQT6 6 800 gallons Sulfuric Acid Tank

**Relationships:****Stack Information:**

ID	Velocity (ft/sec)	Flow Rate (cubic ft/min-actual)	Diameter (feet)	Discharge Area (square feet)	Height (feet)	Temperature (oF)
EQT001	57.3	218.5	9		140	325
EQT002					19	
EQT003			2.5		140	100
EQT004			.17		50	225
EQT005					24	200
EQT006					5	

**Fee Information:**

Subj Item Id	Multiplier	Units Of Measure	Fee Desc
GRP001			0440 - Industrial Gases

# EMISSION RATES FOR CRITERIA POLLUTANTS

AI ID: 42895 - Praxair Inc - Sulphur Hydrogen Mfg Facility

Activity Number: PER20060001

Permit Number: 0520-00170-V0

Air - Title V Regular Permit Initial

## All phases

Subject Item	PM <sub>10</sub>			SO <sub>2</sub>			NOx			CO			VOC		
	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr	Tons/Year
EQT 001 1	7.20	7.20	31.54	0.57	0.57	2.49	48.32	48.32	211.65	14.68	14.68	64.29	5.21	5.21	22.83
EQT 002 2	0.99	0.99	4.34												
EQT 003 3	13.15	13.15	4.52	1.04	1.04	0.36	29.98	29.98	9.88	163.17	163.17	53.8	22.84	22.85	7.53
EQT 004 4													0.94	0.94	4.10
EQT 005 5													0.43	0.43	1.89

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals

### Permit Phase Totals:

PM10: 37.24 tons/yr

SO2: 2.6 tons/yr

NOx: 215.10 tons/yr

CO: 83.09 tons/yr

VOC: 31.45 tons/yr

### Emission rates Notes:

# EMISSION RATES FOR TAP/HAP & OTHER POLLUTANTS

AI ID: 42895 - Praxair Inc - Sulphur Hydrogen Mfg Facility  
 Activity Number: PER200600001  
 Permit Number: 0520-00170-V0  
 Air - Title V Regular Permit Initial

## All phases

Subject Item	Methanol		Sulfuric acid		
	Avg lb/hr	Max lb/hr	Tons/Year	Avg lb/hr	Max lb/hr
EQT 004 4	0.94	0.94	4.10		
EQT 006 6				< 0.001	< 0.001

Note: Emission rates in bold are from alternate scenarios and are not included in permitted totals

## Permit Parameter Totals:

Methanol: 4.10 tons/yr  
 Sulfuric acid: <0.01 tons/yr

## Emission Rates Notes:

# **SPECIFIC REQUIREMENTS**

**AI ID: 42895 - Praxair Inc - Sulphur Hydrogen Mfg Facility**

**Activity Number: PER20060001**

**Permit Number: 0520-00170-V0**

**Air - Title V Regular Permit Initial**

## **EQT001      1    878.60 MM BTU/hr Reformer**

- 1 Control the emission of smoke from any combustion unit (other than a flare) or from any type of burning in a combustion unit (other than a flare) so that the shade or appearance of the emission is not darker than 20 percent average opacity as to obscure vision to a degree equivalent to the above (see Table 4, Chapter 15). [LAC 33:III.1101.B]
- 2 Control the emission of particulate matter so that the shade or appearance of the emission is not denser than 20 percent average opacity, except the emissions may have an average opacity in excess of 20 percent for not more than one six-minute period in any 60 consecutive minutes. [LAC 33:III.1311.C]
- 3 Do not cause, suffer, allow or permit the emission of particulate matter to the atmosphere in excess of 0.6 pounds per 10<sup>6</sup> BTU of heat input. [LAC 33:III.1313.C]
- 4 Conduct a performance/emissions test: Due within 180 days after initial startup (or restart-up after modification), or within 60 days after achieving normal production rate or end of the shutdown period, whichever is earliest. The stack test's purpose is to demonstrate compliance with the emission limits of this permit. Test methods and procedures shall be in accordance with New Source Performance Standards, 40 CFR 60, Appendix A, Method 7E - Determination of Nitrogen Oxides Emissions from Stationary Sources, and Method 10 - Determination of Carbon Monoxide Emissions from Stationary Sources. Use alternate stack test methods only with the prior approval of the Office of Environmental Assessment, Environmental Technology Division, Engineering Services. As required by LAC 33:III.913, provide necessary sampling ports in stacks or ducts and such other safe and proper sampling and testing facilities for proper determination of the emission limits. [LAC 33:III.501.C.6]

## **EQT003      3    0.18 MM BTU/hr Flare**

- 5 Control emissions of smoke from a flare so that the shade or appearance of the emission does not exceed 20 percent opacity, except for a combined total of six hours in any 10 consecutive day period, for burning in connection with pressure valve releases for control over process upsets. [LAC 33:III.1105]
- 6 Ensure destruction of emissions to the flare stack by maintaining the heat content of the flare gas above 300 BTU/scf and by installing, maintaining, and operating according to manufacturer's specifications a heat sensing device to detect the continuous presence of a flame. Alternate devices may be used with the prior approval. To insure the heat content of the flare gas is above 300 BTU/scf, perform an annual gas analysis. Keep these records on site and available for inspection. An alternate site to store records may be used with prior approval. [LAC 33:III.501.C.6]

## **ERP001      Entire Facility**

- 7 Emissions of smoke which pass onto or across a public road and create a traffic hazard by impairment of visibility as defined in LAC 33:III.111 or intensify an existing traffic hazard condition are prohibited. [LAC 33:III.1103]
- 8 Emissions of particulate matter which pass onto or across a public road and create a traffic hazard by impairment of visibility or intensify an existing traffic hazard condition are prohibited. [LAC 33:III.1303.B]
- 9 Maintain best practical housekeeping and maintenance practices at the highest possible standards to reduce the quantity of organic compounds emissions. Good housekeeping shall include, but not be limited to, the practices listed in LAC 33:III.2113.A.1-5. [LAC 33:III.2113.A]
- 10 Failure to pay the prescribed application fee or annual fee as provided herein, within 90 days after the due date, will constitute a violation of these regulations and shall subject the person to applicable enforcement actions under the Louisiana Environmental Quality Act including, but not limited to, revocation or suspension of the applicable permit, license, registration, or variance. [LAC 33:III.2119]
- 11 Carbon monoxide <= 83.09 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year    Statistical Basis: Annual maximum
- 12 Nitrogen oxides <= 215.10 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year    Statistical Basis: Annual maximum
- 13 Particulate matter (10 microns or less) <= 37.24 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year    Statistical Basis: Annual maximum
- 14 Sulfur dioxide <= 2.6 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year    Statistical Basis: Annual maximum

# SPECIFIC REQUIREMENTS

AI ID: 42895 - Praxair Inc - Sulphur Hydrogen Mfg Facility

Activity Number: PER20060001

Permit Number: 0520-00170-V0

Air - Title V Regular Permit Initial

## 3RP001 Entire Facility

- 15 VOC, Total  $\leq$  31.45 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 16 Sulfuric acid  $<$  0.01 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 17 Methanol  $\leq$  4.10 tons/yr. [LAC 33:III.501.C.6]  
Which Months: All Year Statistical Basis: Annual maximum
- 18 Submit standby plan for the reduction or elimination of emissions during an Air Pollution Alert, Air Pollution Warning, or Air Pollution Emergency: Due within 30 days after requested by the administrative authority. [LAC 33:III.5611.A]
- 19 During an Air Pollution Alert, Air Pollution Emergency, make the standby plan available on the premises to any person authorized by the department to enforce these regulations. [LAC 33:III.5611.B]
- 20 Submit Emission Inventory (EI)/Annual Emissions Statement: Due annually, by the 31st of March for the period January 1 to December 31 of the previous year unless otherwise directed. Submit emission inventory data in the format specified by the Office of Environmental Assessment, Air Quality Assessment Division. Include all data applicable to the emissions source(s), as specified in LAC 33:III.919.A-D. [LAC 33:III.919.D]
- 21 Submit Title V permit application for renewal: Due 180 calendar days before permit expiration date. [40 CFR 70.5(a)(1)(iii)]
- 22 Submit Title V monitoring results report: Due semiannually, by March 31st and September 30th for the preceding periods encompassing July through December and January through June, respectively. Submit reports to the Office of Environmental Compliance, Surveillance Division. Certify reports by a responsible company official. Clearly identify all instances of deviations from permitted monitoring requirements. For previously reported deviations, in lieu of attaching the individual deviation reports, clearly reference the communication(s)/correspondence(s) constituting the prior report, including the date the prior report was submitted. [40 CFR 70.6(a)(3)(iii)(A)]
- 23 Submit Title V excess emissions report: Due quarterly, by June 30, September 30, December 31, March 31. Submit reports of all permit deviations to the Office of Environmental Compliance, Surveillance Division. Certify all reports by a responsible official in accordance with 40 CFR 70.5(d). The reports submitted on March 31 and September 30 may be consolidated with the semi-annual reports required by 40 CFR 70.6(a)(3)(iii)(A) as long as the report clearly indicates this and all required information is included and clearly delineated in the consolidated report. [40 CFR 70.6(a)(3)(iii)(B)]
- 24 Submit Title V compliance certification: Due annually, by the 31st of March. Submit to the Office of Environmental Compliance, Surveillance Division. [40 CFR 70.6(c)(5)(iv)]